



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,652	10/04/2000	Yoshitada Oshida	500.39147X00	7028

20457 7590 02/27/2002

ANTONELLI TERRY STOUT AND KRAUS
SUITE 1800
1300 NORTH SEVENTEENTH STREET
ARLINGTON, VA 22209

EXAMINER

SISSON, BRADLEY L

ART UNIT	PAPER NUMBER
----------	--------------

1634

DATE MAILED: 02/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. .

09/678,652

Applicant(s)

OSHIDA ET AL.

Examiner

Bradley L. Sisson

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 12-17 and 30-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 18-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-11 and 18-29, in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the restriction requirement has improperly shown distinctness by relating the inventions of Group I and Group II as product and process of using and that the showing of distinctness should have been made along the lines of apparatus and process of using said apparatus. Applicant also directs attention to claim 4 as reciting the presence of a beam splitter. This is not found persuasive because a proper showing of distinctness between an apparatus and process of using the apparatus can still be made. It is noted that the "DNA inspecting apparatus" does not require any DNA to be present (claim 12) and as such, the apparatus could be used to interrogate signals generated from similar chips where they are being used in widely different assays, such as an immunoassay. While attention has been directed to claim 4 as requiring a beam splitter, such argument has not been found dispositive, as not all claims are so limited.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1634

3. Claims 1-11 and 18-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite with respect to the phraseology of "a DNA inspecting method." As presently written, it is not clear if the DNA is to be performing an inspection of something or whether the claims are drawn to a method of inspecting DNA. Said claim is also indefinite with respect to:

- Just what constitutes "a target;"
- "DNA fragment formed by a preprocessing from a DNA...."
- Just what constitutes "L cells,"
- Just what are the "predetermined regular rules" and how they are to be incorporated;
- If the presence of letters or symbols is to be taken as an abbreviation of a term or variable and not a further characterization of a variable, e.g., M, d, L, D, etc.
- What steps are needed so to execute an inspection;
- The use of the relative term "smaller" and "longer" and
- Just what characteristic(s) are being inspected?

Claims 2-11, which depend from claim 1, fail to overcome all of these issues and are similarly rejected.

4. Claim 2 recites the limitation "M excitation light spots" in line 2. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 3 recites the limitation "said plurality of M irradiation spots" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 1634

6. Claim 3 is indefinite with respect to the metes and bounds of "substantially kd," "direction of said array" and "said array direction."

7. Claim 7 recites the limitation "said M multi excitation spot lights" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim

8. Claim 9 is confusing as to how one is to separate different targets if the targets are all on a chip.

9. Claim 11 is confusing as to how one "launches" light, much less causing light to be "obliquely launched." Said claim is indefinite with respect to how one controls "a relative distance."

10. Claim 18 is confusing as to how fluorescent lights are caused to correspond to respective beams of a laser. Similar issues of clarity exist as to how there is to be "information on said fluorescent light." Claims 19-21, which depend from claim 18, fail to overcome these issues and are rejected.

11. Claim 19 is indefinite with respect to how one achieves a seemingly perpetual circle of "image-photographing images." Claims 20 and 21, which depend from said claim 19, fail to overcome these issues are also rejected.

12. The term "large number" in claim 22 is a relative term, which renders the claim indefinite. The term "large number" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

13. The term "weak light" in claim 22 is a relative term, which renders the claim indefinite. The term "weak light" is not defined by the claim, the specification does not provide a standard

Art Unit: 1634

for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

14. Claim 22 is indefinite with respect to how one "store[s] data on said photon-counted numbers."

15. Claim 22 is confusing as to how one constructs a "fluorescent light picture" based on stored data. Seemingly, a light source would be needed as well as some projection means. It is further unclear how the picture relates to the objective of the claim- DNA inspecting.

16. Claim 23 is indefinite with respect to how one is able to get photons to count, see line 19 where "photon-counted numbers" is written.

17. The term "long and narrow" in claim 23 is a relative term which renders the claim indefinite. The term "long and narrow" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

18. Claim 23 recites the limitation "said sheet-shaped excitation lights" in line 10. There is insufficient antecedent basis for this limitation in the claim.

19. Claim 23 is confusing as to what is being added to what: See lines 3-5, which read in part: "...coupling a fluorescent molecule-added DNA fragment with a DNA corresponding thereto...."

20. Claim 26 is indefinite with respect to how one can achieve a "2-dimentional straight line."

21. Claim 27 lacks antecedent support for "said multi-spot lights" and for "said sheet-shaped excitation lights." It is also confusing as to whether each colored light is, in and of itself,

Art Unit: 1634

comprised of two or more wavelengths of light, or whether the colored lights are to have different wavelengths.

22. The term "large number" in claim 28 is a relative term that renders the claim indefinite. The term "large number" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

23. Claims 28-29 each set forth a number of steps, yet the steps enumerated do not seemingly result in the desired endpoint- and that being the inspection of DNA. Using claim 28 as an example, the very last step of said claimed method requires one to only then inspect DNA, yet the claims are all drawn to a method of inspecting DNA. Seemingly, such preceding method steps are not directed to the actual method but to preliminary steps. The end result is the appearance of claims drawn to a method of inspecting DNA by none other performing the step of inspecting DNA. Such language in essence constitutes an omnibus claim.

Claim Rejections - 35 USC § 101

24. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

25. Claim 1-11 and 18-29 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific asserted utility or a well-established utility.

The claims are all drawn to a method of inspecting DNA. The method claims do not identify what specific aspect of DNA is being inspected. While DNA is known to exist and has been the subject of much investigation, the aspect of performing an inspection for the sake of

Art Unit: 1634

performing an inspection, with the methods not resulting in the generation of a product that has a substantial and credible utility is not enough to meet the test of utility under 35 USC 101.

Claims 1-11 and 18-29 are also rejected under 35 U.S.C. 112, first paragraph.

Specifically, since the claimed invention is not supported by either a specific asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Conclusion

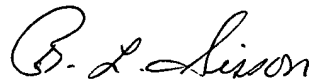
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is (703) 308-3978.

The examiner can normally be reached on 6:30 a.m. to 5 p.m., Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones can be reached on (703) 308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Art Unit: 1634

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



Bradley L. Sisson
Primary Examiner
Art Unit 1634

bls
February 25, 2002